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The psychology of menstruation

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Running Head: THE PSYCHOLOGY OF MENSTRUATION

ABSTRACT

The menstrual cycle is not only a physiological experience, it is also a psychological, social, and cultural one. However, the majority of the research on menstruation views the experience of menstruation via the medical model. Through this lens, menstruation is not a natural, healthy part of a woman's experience, but a pathology requiring diagnosis and treatment. This study focuses on whether cultural and social expectations affect women's psychological evaluations of the menstrual experience, and particularly, whether identification with feminism affects attitudes toward menstruation and the physical and emotional symptoms experienced. Subjects were 87 college women who completed 30 days of prospective mood ratings. 43 subjects completed the Menstrual Symptom Questionnaire (Chesney & Tasto, 1975), the Menstrual Attitude Questionnaire (Brooks-Gunn & Ruble, 1980), and a Feminism Scale (Dempewolff, 1972) prior to beginning the mood ratings as part of a sensitizing manipulation. The remaining subjects served as controls to determine if demand characteristics affected attitudes and mood. Results indicated that identification with feminism was associated with more positive mood around menstruation.

Menstruation is one of the few experiences shared by most women worldwide. The menstrual cycle is not only a physiological experience, it is also a psychological, social, and cultural one. However, the majority of the research on menstruation views the experience via the medical model. Through this lens, menstruation is not a natural, healthy part of a woman's experience, but a pathology requiring diagnosis and treatment. Nonetheless, it is naive to imagine that menstruation is simply a physiological process. Jarvis & McCabe (1991) assert that a woman does not simply experience menstruation as a passive, hormonal event, but also actively determines what the experience means to her as an individual.

The majority of menstrual research focuses on premenstrual syndrome (PMS) and reflects a bias toward the medical model. However, menstruation is first and foremost a healthy physiological process eliminating materials the body no longer needs. One need only consider the many diseases whose primary symptom is amenorrhea, or absence of menstruation, to recognize the health benefits of menstruation. Nonetheless, the widespread acceptance of the stereotype of menstruation as debilitating has produced a bias even in the scientific literature. Sommer claims, "That researchers have repeatedly felt the need to

confront the question of menstrual impairment, despite the preponderance of objective evidence to the contrary, underscores the psychological and social power of beliefs about menstruation" (Sommer, 1986, p. 119).

Strong arguments can be made for socio-cultural influence on the menstrual experience. Cross-cultural analyses indicate that although the same physiological symptoms are identified by women worldwide, they are not uniformly perceived as problematic or debilitating. For instance, Native American women view menstruation as a source of empowerment and growth (Mills, 1988) while a study of women in India discovered menstruation was associated with extreme positive emotions (Chaturvedi & Chandra, 1990).

That social expectations may influence evaluations of the menstrual experience is evident in research on early adolescents. It is often assumed that menstrual distress is due to hormonal changes associated with ovulation. However, reports of menstrual distress among menarcheal girls cannot be tied to ovulation because girls do not typically ovulate until one or two years after menarche (Brooks-Gunn, 1986). Brooks-Gunn (1986) found that premenarcheal girls expect to experience more pain than their postmenarcheal peers report. This may result in a self-fulfilling

prophecy in which the expectation of pain causes greater attention to and report of pain.

Although pre- and postmenarcheal girls of the same age hold the same expectations of physical premenstrual and menstrual symptoms, they differ on expectations of emotional symptoms like negative affect. The premenarcheal girls believe negative affect is more severe during the period, perhaps reflecting the fact that they have not yet learned that premenstrual tension is believed to be more severe than menstrual tension. Interestingly, expectations of symptom severity decrease with age -- maybe as a woman gains more experience with menstruation.

Brooks, Ruble & Clark (1977) found that social expectations profoundly influence attitudes toward menstruation. For instance, if a woman believes menstruation is debilitating, she will expect, and therefore label, sensations as "menstrual distress" that in another phase of her cycle would not be labelled as such. Brooks, et al. (1977) examined the attitudes of undergraduate women. Seventy-seven percent of the sample reported somewhat positive attitudes toward menstruation. One-half of the sample believed menstruation was bothersome while two-thirds accepted menstruation and did not perceive it as disruptive.

Subjects with more negative attitudes toward menstruation reported more menstrual distress. However, it remains difficult to determine whether the relationship between negative attitudes toward menstruation and report of menstrual distress is one of a self-fulfilling prophecy (where the belief in the impact of menstrual cycle change results in labeling state according to cycle phase) or whether the relationship is the inverse (where experiencing pain with each cycle results in negative attitudes).

The most compelling evidence of the influence of social expectations on the menstrual experience, most specifically attitudes toward menstruation, is found in studies on gender differences. Brooks-Gunn & Ruble (1986) found that male and female college students did not differ on the type of menstrual symptoms expected. While one could argue this is due to men's associations with women, men have no experiential knowledge of menstruation on which to base their assumption. So one must ask on what men are basing their assumptions . Such ideas may reflect stereotypes.

Ruble, Boggiano, & Brooks-Gunn (1982) suggest that gender differences in beliefs about menstruation may serve to maintain

stereotypes of menstruation as debilitating. They asked male and female college students to imagine a conversation with a woman who remarks on her bad mood and then gives a reason for her irritability. Subjects then rated how annoyed they felt at different explanations, two of which were menstrual-related while other excuses included not getting enough sleep or having a cold. While women did not feel cycle phase justified behavior, men believed it was excusable for women to act negatively for menstrual reasons.

This demonstrates acceptance of the stereotypical "classic" menstrual mood pattern in which mood is lowest premenstrually and menstrually, improving only postmenstrually, or after the menstrual period. In fact, one study found that men did not believe women could experience an increased sense of well-being premenstrually, although women have identified many positive emotions (e.g., increased energy, heightened sexual arousal, excitement). Men believe women are more fatigued, more withdrawn and more irritable and physically uncomfortable premenstrually (Christensen & Oei, 1990).

Research on the classic menstrual mood pattern highlights three important methodological problems with menstrual studies. First,

retrospective mood reports may be more reflective of stereotypes or attitudes than actual experience. McFarlane, Martin & Williams (1988) found that although women did not report the classic menstrual mood pattern prospectively, they reflected that pattern when recalling their mood. In fact, in this study women's mood fluctuated more over the days of the week than across the menstrual cycle.

Secondly, demand characteristics may serve to highlight the nature of the study thereby causing women to focus on changes associated with their menstrual cycle. In a study examining self-reported mood in four groups: men, women who were aware of the menstrual focus of the study, women who were unaware, and women who provided only retrospective mood reports, the retrospective and aware groups both showed significant cyclicity in contrast to the men and unaware groups (Englander-Golden, Sonleitner, Whitmore & Corbley, 1986). When subjects are aware they are participating in a study investigating menstrual mood variation, they report more mood changes. Conversely, when the purpose of the study is concealed, fewer changes are reported. Interestingly, when Englander-Golden et al. asked the unaware group (who had previously shown no cyclicity) to recall their mood for their last menstrual cycle, subjects

reported bad moods around menstruation and good moods the rest of the time, reflective of the classic menstrual mood pattern.

A third problem is that the majority of mood checklists and menstrual symptom questionnaires are almost entirely composed of negative descriptors, and "when faced with only negative items, people may respond more negatively than if positive options were included" (McFarlane, et al, 1988, p. 203).

A feminist critique of the research demands that one ask oneself why a woman's mood variance is perceived as more pathological than a man's. One needs to realize "that our concepts of what represent 'detrimental' cyclicity may be deeply affected by value judgements" (Englander, Sonleitner, Whitmore & Corbley, 1986, p. 94). Johnson (1987) claims that PMS is best understood symbolically as an issue that emerged out of a context in which the status and roles of women were improving. This change caused a role conflict for many women because they are expected to be both "productive and reproductive," that is, have a career and a family (349). This ambiguous message can be answered by PMS which "simultaneously and symbolically [denies] the possibility of each: in menstruating, one is potentially fertile but obviously nonpregnant; in

having incapacitating symptomatology one is exempted from normal work role expectations" (349). Thus, PMS makes a woman's ambiguous position medically (i.e., legitimately) meaningful.

An analysis of medical, popular, and feminist literature by Rittenhouse (1991) supports this appraisal of PMS. She discovered that widespread discussion of PMS did not emerge until the 1980's and "were published at a time when women were not only participating in increasing numbers in the paid labor force but were also proving themselves to be quite capable...PMS brought back old stereotypic views of women's abilities to control themselves," particularly in light of the British manslaughter trials of the early 1980's in which two women used PMS as a successful defense against killing their partners (419).

Rome (1986) asserts: "Labelling PMS as 'the world's commonest disease' is anti-woman, treating natural cycle changes as pathological" (145). While not claiming that there are no changes associated with menstruation, relabeling the changes typically called "symptoms" can allow one to think differently about them. A feminist critique can even help reevaluate what appear to be unequivocal physiological changes. Rome claims: "Bloating, for instance, can be painful in and of itself, but

it would not carry a social stigma if we all wore loose clothing...and believed being fat" was beautiful (147).

The feminist critique is not without merit. It has been found that women who are "most traditionally oriented seem to learn to place more emphasis on and pay more attention to symptoms associated with the menstrual cycle" (Chrissler, 1988, 827-828). Consequently, women with more stereotypically masculine or androgynous traits report less menstrual distress. Some of these traits embody the egalitarian ideals of feminism. Therefore, whether women who identify with feminism report better attitudes toward menstruation and/or less menstrual distress should be examined, particularly because there has been no research examining this relationship to date.

Five hypotheses were examined. First, (1) negative attitudes toward menstruation were expected to be related to younger age at menarche and social comparison of menarcheal experience. Secondly, (2) positive attitudes toward menstruation would be correlated with identification with feminism. Third, (3) positive attitudes toward both menstruation and feminism would be associated with fewer reports of physical and emotional menstrual distress. Fourth, (4) due to demand characteristics,

subjects in the experimental condition (in which the menstrual focus of the study was highlighted) would report more prospective negative premenstrual and menstrual mood. And finally, (5) all subjects would recall more negative premenstrual and menstrual mood than reported prospectively.

METHOD

Subjects

Subjects were 87 college women enrolled in Introduction to Psychology courses a mid-sized Midwestern university. The average age was 19 with the majority being Freshmen (n = 68), and the remaining subjects being either Sophomores (n = 12) or Juniors (n = 5). Ninety-eight percent of the subjects were White. Subjects received course credit for participation in the study.

Design

Subjects were randomly assigned to either an "experimental" or "control" group. The experimental group consisted of 44 women who were part of a sensitizing manipulation to explore the effects of demand characteristics on mood ratings. The control condition was comprised of 43 subjects. All participants were told the study was examining "The

Effects of Daily Life on College Women's Mood." T-tests and Chi-square analyses demonstrated that random assignment was successful; there were no significant differences between the two groups on attitudes toward menstruation, identification with feminism or menstrual symptoms experienced.

Because there is no consistency on length of cycle phase, the researcher operationally defined four phases. The five days before the menstrual period was termed premenstrual, all days of blood flow was called menstrual, and the five days after cessation of blood flow was termed postmenstrual.

Measures

Subjects completed four questionnaires and 30 days of prospective mood ratings. Experience of menstrual distress was examined via the Menstrual Symptom Questionnaire (MSQ) (Chesney & Tasto, 1975). The Menstrual Attitude Questionnaire (MAQ) (Brooks-Gunn & Ruble, 1980) was used to determine women's attitudes toward menstruation on five factors: menstruation as a debilitating event, menstruation as a bothersome event, menstruation as a positive event, anticipation and prediction of the onset of menstruation, and denial of any effect of menstruation.

Attitudes toward feminism were measured with the Feminism Scale (Dempewolff, 1972) which contains both positive and negative statements about women. These statements are fairly noncontroversial, and the scale is rather old, but it examined attitudes toward the pragmatic idea of equality between the sexes which is a unifying ideal among most of the different types of feminism. Daily prospective mood ratings were collected using the Positive and Negative Affect Scale (PANAS) (Watson, Clark & Tellegen, 1988) which contains 20 descriptors of positive and negative affect. This mood scale was used to counteract the methodological problem of negative bias in many menstrual study questionnaires. Finally, subjects completed a demographic questionnaire developed by the researcher which included questions regarding age, classification, self-asserted identification with feminism, use of oral contraceptives, and various menstrual-related questions.

Procedure

Subjects in the experimental condition completed three questionnaires (MSQ, MAQ, and the Feminism Scale) prior to taking home a packet containing the PANAS which they were to complete every day at supper time for 30 days. The initial questionnaires were intended to

serve as demand characteristics focusing the subjects' attention on their menstrual cycle changes. Subjects in the control condition did not complete these questionnaires until after 30 days of prospective mood ratings. After 30 days of daily mood ratings, all subjects completed the demographic questionnaire developed by the researcher.

The demographics questionnaire asked subjects to describe their mood the five days before menstruation (premenstrual) as well as through the duration of their period (menstrual). Because scoring this involved the subjective evaluation of coding responses as either positive, negative, or neutral change, this could be problematic, but for the most part the descriptions retained their integrity because they were often unequivocally positive or negative descriptions. In order to compare prospective and retrospective mood reports, scores on the MSQ were compared to questions on the demographic questionnaire about the intensity of physical symptoms premenstrually and through the duration of the period.

Because definitions of feminism are so discrepant, the demographics questionnaire asked subjects to provide their own definition of feminism and then respond "yes" or "no" to the question: "According to your own

definition, do you consider yourself a feminist?" Self-asserted feminism was then compared with scores on the Feminism Scale. Finally, after 30 days of mood ratings, subjects reported the dates of their period. Premenstrual, menstrual, and postmenstrual mood scores were analyzed to determine whether or not there were any menstrual-related mood changes.

RESULTS

Test of Hypotheses

Pearson correlations did not support the first hypothesis that age at menarche and social comparison of menarcheal experience would be related to negative attitudes toward menstruation. Pearson correlations also did not indicate that positive attitudes toward menstruation were correlated with identification with feminism (Hypothesis 2). Hypothesis 3 was partially supported. T-tests revealed that self-asserted feminists ($n = 55$) reported lower PANAS scores ($X = 45.5$) than non-feminists ($n = 30$, average mood score = 49.3) indicating less emotional menstrual distress ($t = -2.23$, $p < .05$). There was also a trend for self-asserted feminists to have a more positive menstrual mood state ($X = 44.7$) than non-feminists ($X = 47.2$) although this was not significant at the .05 level.

However, there was no correlation between physical and emotional menstrual distress and attitudes toward menstruation. T-tests performed on Hypothesis 4 showed no significance. Subjects in the experimental condition did not report more prospective negative premenstrual or menstrual mood. T-tests also did not support Hypothesis 5. Subjects did not recall more negative premenstrual and menstrual mood than they reported prospectively.

Additional Analyses

Because there has been no research on the impact of feminism on the menstrual experience, Pearson correlations were performed to assess the relationship between identification with feminism and mood variability, menstrual symptoms, and attitudes toward menstruation. Identification with feminism, indicated by a higher score, was significantly correlated with both more positive premenstrual mood ($r = -.42$, $p < .05$) and more positive postmenstrual mood ($r = -.28$, $p < .05$). There was also the same trend for positive menstrual mood although it did not reach significance. Score on the Feminism Scale was not correlated with menstrual distress as measured by the MSQ or with attitude toward menstruation as indicated by the MAQ.

There was very little variance on scores on the Feminism Scale. Essentially, all subjects had high scores indicating identification with feminism. However, there were significantly more self-asserted feminists ($n = 55$) than non-feminists ($n = 30$)($t = 2.43$, $p < .05$). Self-asserted feminists did score somewhat higher on the Feminism Scale ($X = 95.1$) than non-feminists ($X = 91.2$), but t-tests did not reveal a significant difference. Due to the discrepancy between self-asserted feminism and scores on the Feminism Scale, additional analyses were performed comparing identification with feminism with other variables. The following correlation matrix shows the results.

IDENTIFICATION WITH FEMINISM
(via the Feminism Scale)

SYMPTOMS	$r = .09$
ATTITUDE	$r = -.2$
INTENSITY OF FLOW	$r = -.26^*$
DURATION OF FLOW	$r = -.02$

***p < .05**

In order to examine the validity of the "classic" menstrual mood pattern (in which mood is lowest premenstrually, a little better during

the period, and returns to normal postmenstrually), Pearson correlations were performed comparing the average PANAS scores for the premenstrual, menstrual, and postmenstrual phases. Premenstrual mood score was correlated with menstrual mood score (r = .26, p < .05) as well as postmenstrual mood score (r = .45, p < .05). Menstrual and postmenstrual mood scores were also positively correlated (r = .52, p < .05). These results do not support the "classic" menstrual mood pattern because no definite cyclicity was shown.

Premenstrual Mood	Menstrual Mood	Postmenstrual Mood
X = 47	X = 45.7	X = 46
SD = 6.63	SD = 5.72	SD = 6.42

DISCUSSION

The first hypothesis, that age at menarche and social comparison of menarcheal experience would be related to negative attitudes toward menstruation, was not supported. The average score on the MAQ was 108 out of a possible 175, indicating that attitudes toward menstruation were fairly neutral. This is consistent with other research suggesting that undergraduate women have somewhat positive attitudes toward menstruation (Brooks, Ruble & Clark, 1977).

Positive attitudes toward menstruation were not correlated with identification with feminism (Hypothesis 2). Again, this could be due to the fact that the scores on the MAQ were in the moderate range, and consequently, did not indicate extremely positive attitudes which would affect correlation analyses. Since this is a novel area of research this result needs further study.

There was no correlation between physical and emotional menstrual distress and attitudes toward menstruation (Hypothesis 3). Thus, research suggesting that negative attitudes toward menstruation are associated with more report of menstrual distress was not supported (Brooks, Ruble & Clark, 1977). Nonetheless, this hypothesis was partially supported. Self-asserted feminists reported less emotional menstrual distress, measured via mood variability, than non-feminists. There was also a trend for self-asserted feminists to have a more positive menstrual mood state than non-feminists although this was not significant.

Hypothesis 4 was not supported; subjects in the experimental condition did not report more prospective negative premenstrual or menstrual mood. This finding does not support research suggesting that

awareness of the menstrual focus of the study alerts subjects to menstrual-related changes (Englander-Golden, Sonleitner, Whitmore & Corbley, 1986). Demand characteristics had no effect on mood ratings. This result could be due to some contamination between groups. However, debriefing interviews indicated that highlighting the nature of the study was successful in the experimental group (i.e., subjects knew that the menstrual cycle was being investigated) and that deception was successful in the control group (i.e., very few subjects guessed the true nature of the study).

Hypothesis 5 was not supported. Subjects did not recall more negative premenstrual and menstrual mood than they reported prospectively. This also is in contrast to literature suggesting that retrospective reports are biased and are more indicative of attitudes or stereotypes than actual experience (McFarlane, Martin & Williams, 1988).

There was validity demonstrated for the Feminism Scale and subject agreement with the demographic question: "According to your own definition, do you consider yourself a feminist?" However, this does not explain the 30 subjects who did not identify themselves as feminists (even though they had high scores on the Feminism Scale). Essentially, all

subjects had high scores on the Feminism Scale indicating positive identification with feminism. The problem may be that there are so many different definitions of feminism, and some types of feminism have a bad reputation in our society. Definitions of feminism were coded as positive or negative, regardless of whether or not the subject agreed that she was a feminist according to her definition. Even subjects who gave what were coded as positive definitions of feminism were loath to identify themselves as such. This demonstrates that there is a lot of misunderstanding and confusion as to what represents feminism.

Mood was associated with identification with feminism, both a high score on the Feminism Scale and self-asserted feminism. High premenstrual mood ratings, indicating worse mood, were positively correlated with high scores on the Feminism Scale. This indicates that those identifying with feminism had better premenstrual mood than their counterparts. In addition, premenstrual mood was associated with self-asserted feminism on the demographic questionnaire. Those who agreed they were a feminist reported better premenstrual mood. There was a trend at $p < .08$ for the same result with menstrual mood where identifying oneself as a feminist was related to better menstrual mood.

Of course, this could be interpreted in many ways, but one possible way is that feminists may accept the whole range of women's experiences and do not view their menstrual period as a detriment to progress in any way. This may manifest itself in more positive moods around menstruation because one's period is not viewed as a burden but only one of the natural cycles of life.

Mood variability results did not support the "classic" menstrual mood pattern which suggests that mood is worst premenstrually, a little better during the period, and returns to normal postmenstrually (Ruble, Boggiano, & Brooks-Gunn,1982). Premenstrual and menstrual mood, premenstrual and postmenstrual mood, and menstrual and postmenstrual mood ratings were all correlated meaning a tendency toward negative mood in one phase indicated the same tendency in another. Average mood scores in all these phases were relatively high.

The most negative mood was reported in the premenstrual phase ($X = 47$), but there was only a range of 1.3 points across all three phases. The highest possible negative mood score was 54, meaning mood was fairly negative overall. This result demands more research because it may indicate: 1) that something about the experience of menstruation (e.g.,

anticipation of blood flow, or attention to disruption caused by menstrual flow) causes negative mood; or 2) that women's moods are normally more negative than may initially be expected. Further research should compare relative mood ratings between women and men to determine whether mood is indeed more consistently negative than positive. Research by Englander-Golden, Sonleitner, Whitmore & Corbley (1986) suggests little difference in mood variability among women and men.

Results of the present study could be affected by limitations in the sample. The sample was very homogenous: ninety-eight percent of the subjects were White and over eighty percent were eighteen- or nineteen-year-old Freshmen. In addition, as college students, the sample was highly educated. Therefore, results may not be generalizable to other populations.

The impact of identification with feminism on the menstrual experience demands further research. First, the Feminism Scale, although examining agreement with the ideal of equality, was not controversial or "radical" as many people perceive feminism to be. The lack of variance on Feminism Scale scores indicates that the findings may not be generalized to feminists in general. Perhaps agreement on the Feminism Scale is

confounded by some other variable (for instance, independence).

Nonetheless, the results do indicate that women are not victims of biology. Subjects in this study reported very few menstrual-related changes demonstrating that they do not passively experience menstruation as a hormonal event, but do, indeed, decide what the experience means to them as an individual. This supports Rome (1986) who claims that even unequivocal physiological changes can be experienced differently if interpreted differently.

Further menstrual-related research is warranted because results could give women clues into the cognitions underlying evaluations of the menstrual experience. Anecdotally at least, some subjects remarked that they had learned a lot about their cycle changes by simply participating in this study. Future research could result in a reduction of complaints of physical and emotional menstrual distress.

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